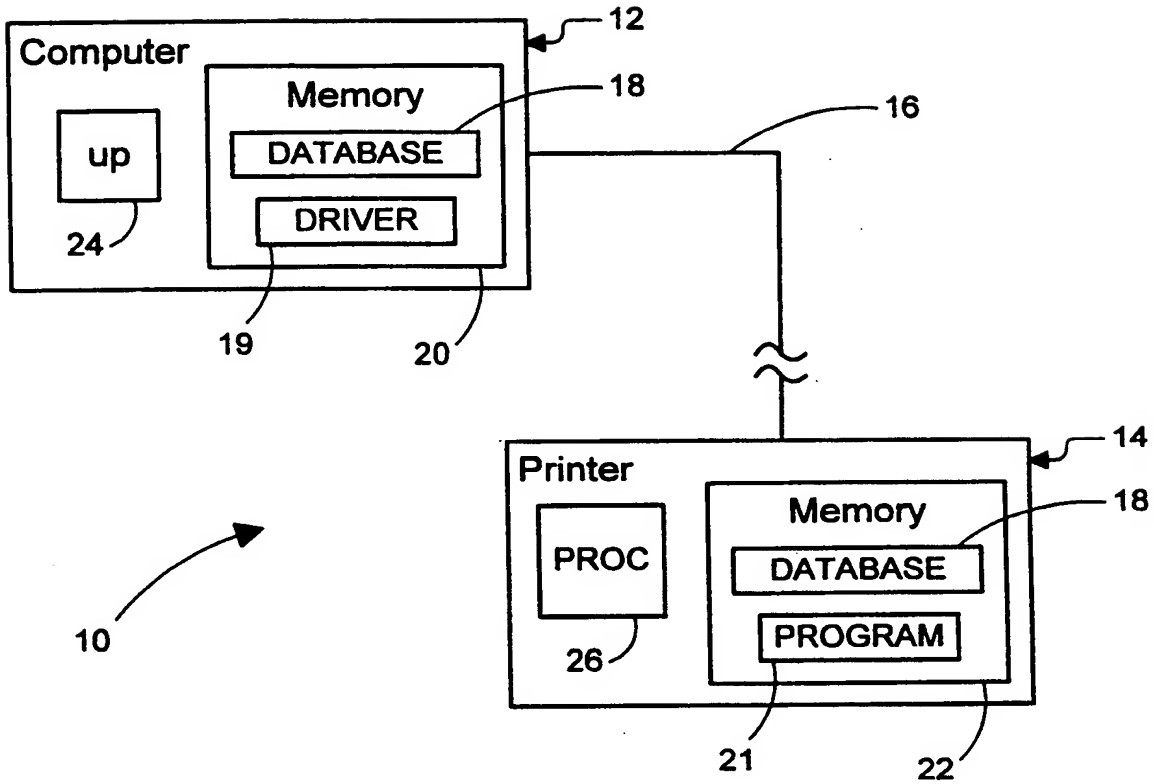
FIGURE 1


Computer
12
Memory
18
up
DATABASE
DRIVER
16
24
19
20
Printer
14
Memory
18
PROC
DATABASE
PROGRAM
10
26
21
22

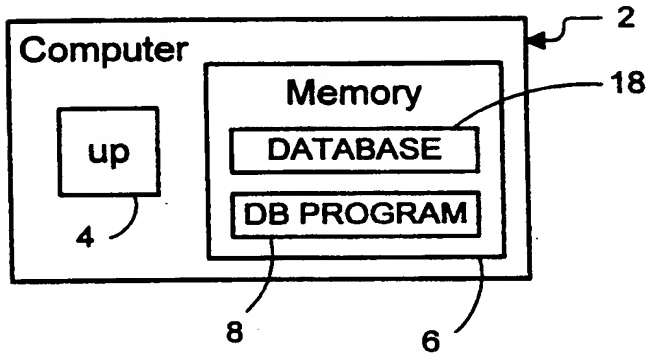

Computer
2
Memory
18
up
DATABASE
DB PROGRAM
4
8
6

FIGURE 2a

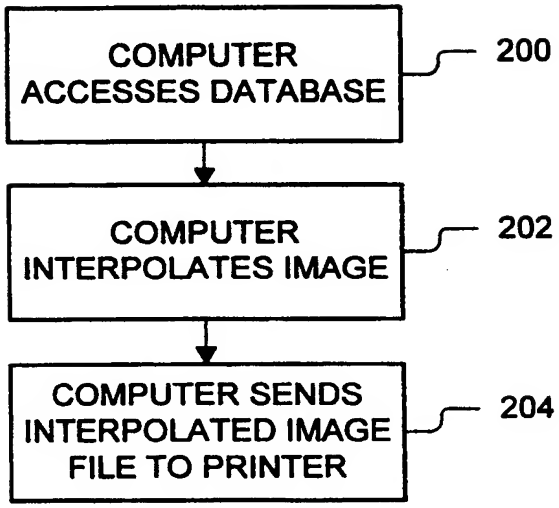


FIGURE 2b

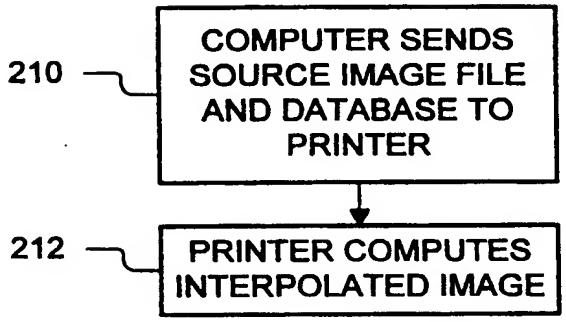


FIGURE 2c

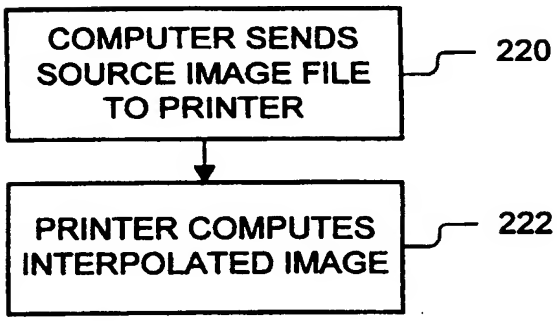
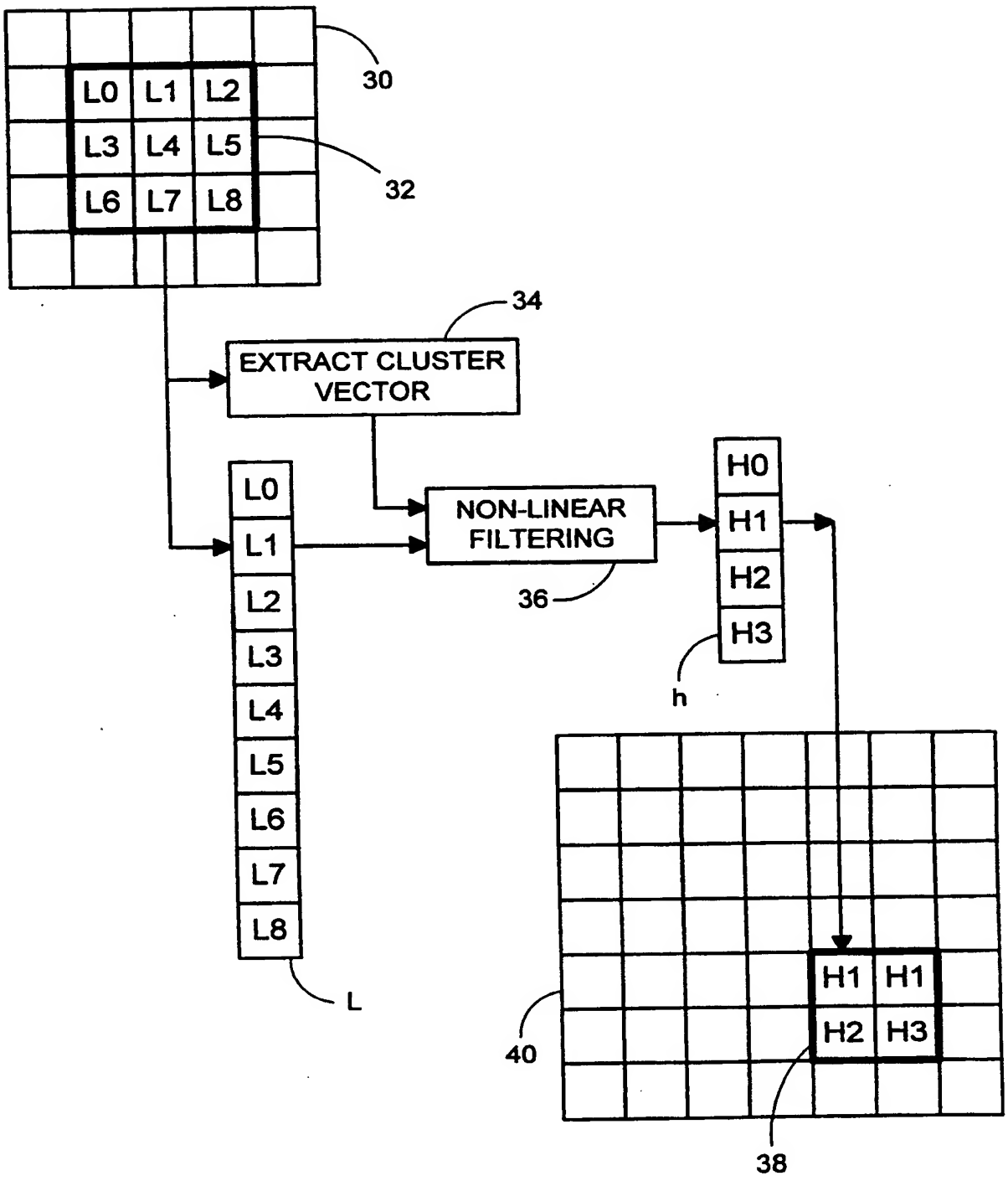


FIGURE 3


L0
L1
L2
L3
L4
L5
L6
L7
L8
30
32
34
EXTRACT CLUSTER VECTOR
NON-LINEAR FILTERING
36
H0
H1
H2
H3
h
L
H1
H1
H2
H3
40
38

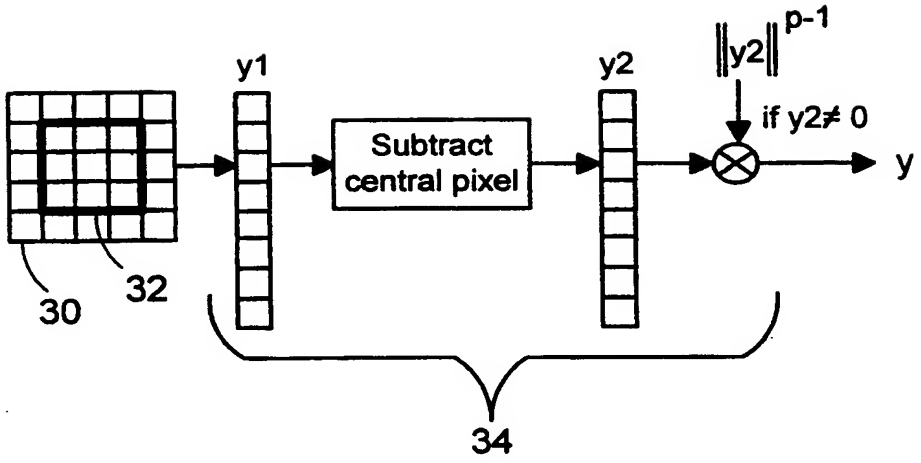


FIGURE 4

FIGURE 5

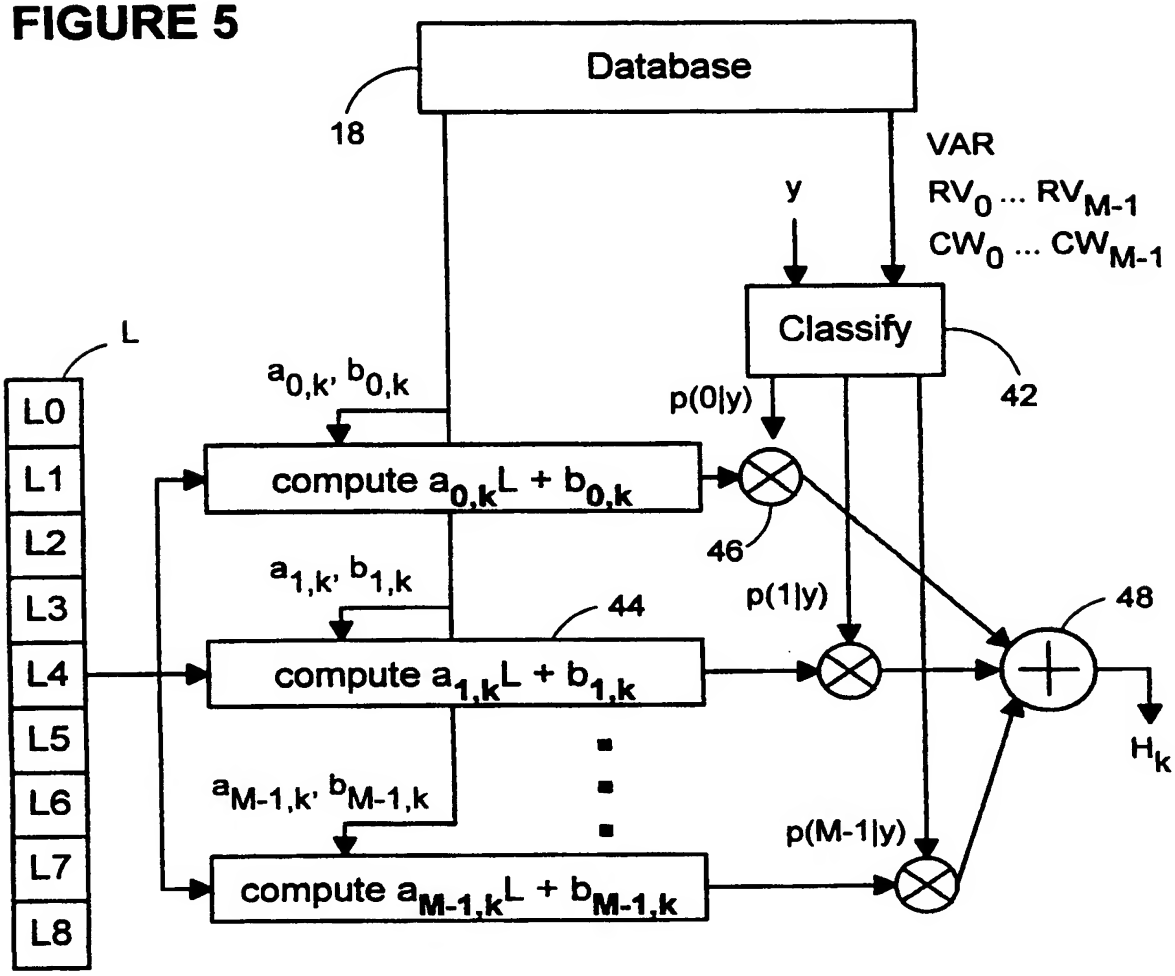


FIGURE 6

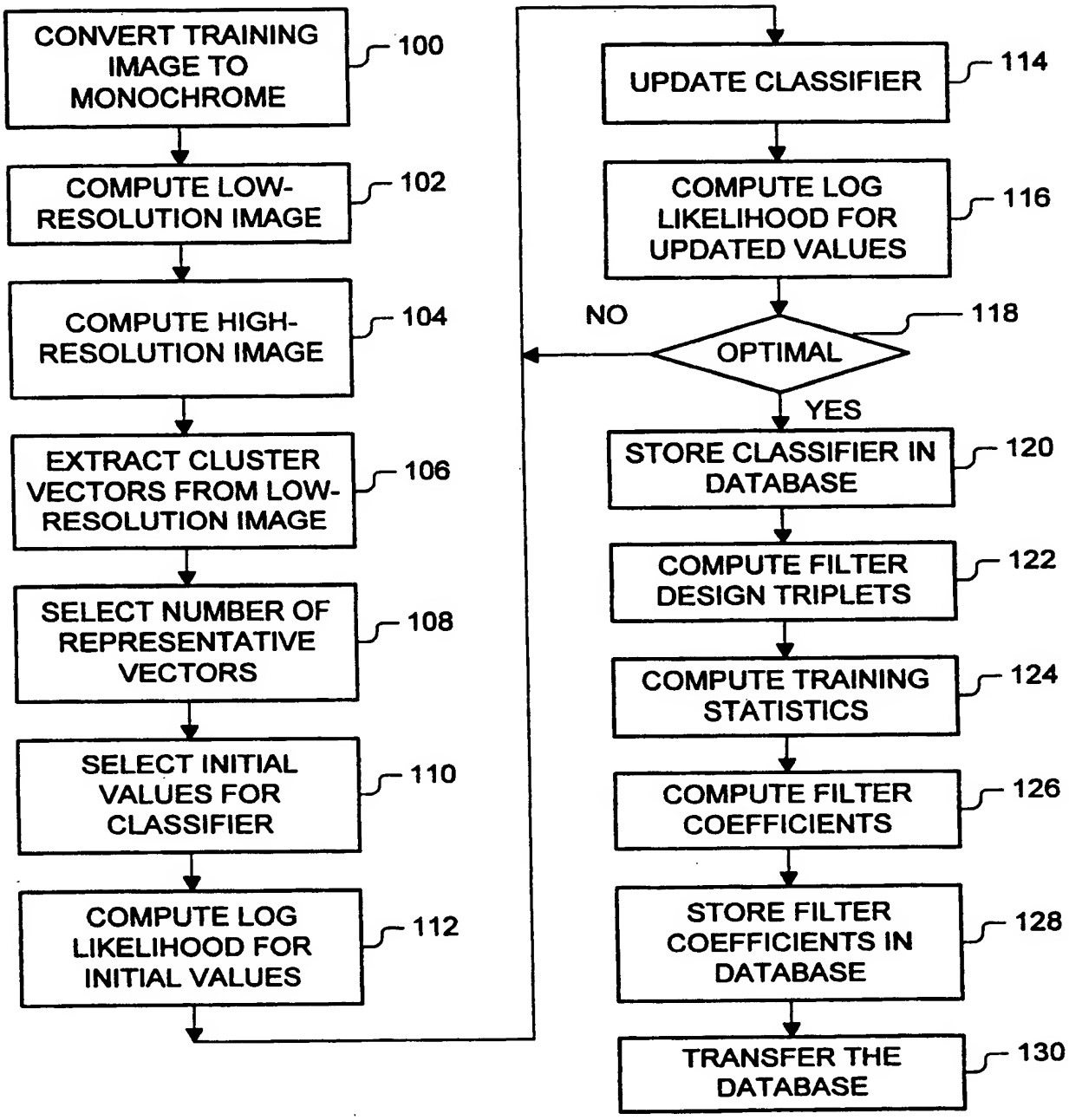
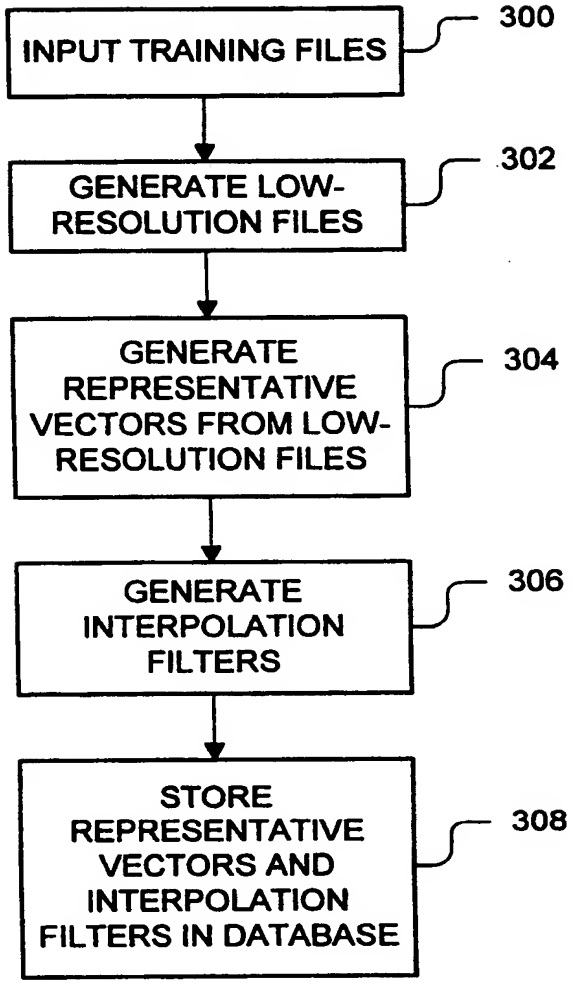

CONVERT TRAINING IMAGE TO MONOCHROME
100
COMPUTE LOW-RESOLUTION IMAGE
102
COMPUTE HIGH-RESOLUTION IMAGE
104
EXTRACT CLUSTER VECTORS FROM LOW-RESOLUTION IMAGE
106
SELECT NUMBER OF REPRESENTATIVE VECTORS
108
SELECT INITIAL VALUES FOR CLASSIFIER
110
COMPUTE LOG LIKELIHOOD FOR INITIAL VALUES
112
UPDATE CLASSIFIER
114
COMPUTE LOG LIKELIHOOD FOR UPDATED VALUES
116
NO
OPTIMAL
118
YES
STORE CLASSIFIER IN DATABASE
120
COMPUTE FILTER DESIGN TRIPLETS
122
COMPUTE TRAINING STATISTICS
124
COMPUTE FILTER COEFFICIENTS
126
STORE FILTER COEFFICIENTS IN DATABASE
128
TRANSFER THE DATABASE
130

FIGURE 7


INPUT TRAINING FILES
300
GENERATE LOW-RESOLUTION FILES
302
GENERATE REPRESENTATIVE VECTORS FROM LOW-RESOLUTION FILES
304
GENERATE INTERPOLATION FILTERS
306
STORE REPRESENTATIVE VECTORS AND INTERPOLATION FILTERS IN DATABASE
308